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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/523,350	03/10/2000	Hiroyuki Kino	36856.283	5246

7590

06/16/2003

Joseph R Keating Esquire
Keating & Bennett LLP
10400 Eaton Place Suite 312
Fairfax, VA 22030

EXAMINER

KIM, PAUL D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 06/16/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/523,350

Applicant(s)

KINO ET AL.

Examiner

Paul D Kim

Art Unit

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-- The MAILING DATE of this c mmunication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8,10-16,18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8,10-16,18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 16 & 22.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This office action is a response to the amendment filed on 5/28/2003.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 6, 8, 10-14, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Matsymoto et al. (JP 03005377 A) and Yasuda et al. (JP-4367569 A).

Fig. 5 of Applicant Admitted Prior Art teaches a method of manufacturing a flattened-ring magnetic core comprising steps of: providing a plurality of flattened-ring compact bodies (21) made of a magnetic material having holes (22); arranging the plurality of flattened-ring compact bodies that a axis of each of the flattened-ring compact bodies is arranged in horizontally; and firing the flattened-ring compact bodies (lines 16-26 of page 1 in specification).

However, Applicant Admitted Prior Art does not disclose a step of attaching the plurality of flattened-ring compact bodies to one another. Matsymoto et al. teach a method of making a piezoelectric ceramic formed body including steps of attaching a plurality of ceramic bodies (4) vertically arranged in a vessel (5) as shown in Fig. 5 and forming ZrO₂ powder (3) in between the ceramic bodies (see Constitution) for

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preventing bond-sticking during a sintering process. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a flattened-ring compact bodies of Applicant Admitted Prior Art by attaching a plurality of ceramic bodies vertically arranged with a powder in between as taught by Matsymoto et al. for the purpose of preventing sticking ceramic bodies during a sintering process to improve production efficiency.

Also, Applicant Admitted Prior Art, modified by Matsymoto et al., does not disclose a step of attaching a power made of an organic to a surface of the flattened-ring compact bodies and vaporized during the firing step. Yasuda teaches a process of making an inserting sheet for firing ceramic comprising steps of inserting sheet for interposing upon firing ceramic mouldings comprises a base sheet formed from shaped inorganic powder (2) with an organic powder binder (3) and firing the ceramic mouldings with the interposing sheet and the organic powder is vaporized for preventing bond-sticking during the firing step and enabling recovering of fired mouldings separately. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a flattened-ring compact bodies of Applicant Admitted Prior Art, modified by Matsymoto et al., by attaching an organic powder on the surface of the composite structure as taught by Yasuda for the purpose of preventing bond-sticking during the firing step and enabling recovering of fired mouldings separately.

Regarding claims 8, 10, 16, 18 and 20: The size of the particles of the inorganic metallic powder and the shape of the flattened-ring compact bodies would have been an obvious matter of design choice to use the desirable materials and shapes.

4. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Matsymoto et al. and Yasuda, and further in view of Shirahata (US PAT. 6,005,468).

Applicant Admitted Prior Art, modified by Matsymoto et al. and Yasuda, teaches all the claimed invention exception of a bar attached each of a pair of sides of the stacked flattened-ring compact bodies. Fig. 16 (a) of Shirahata shows a bar (64) attached each side of flattened-ring compact bodies (2A,2B,2C) for holding the compact bodies. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a flattened-ring compact bodies of Applicant Admitted Prior Art, modified by Matsymoto et al. and Yasuda, by attaching a bar to the flattened-ring compact bodies as taught by Shirahata for the purpose of maintaining a stable condition of the flattened-ring compact bodies to prevent falling off during the manufacturing process.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, 5, 6, 8, 10-16, 18 and 20 have been considered but are moot in view of the new ground(s) of rejection. Rejections are based on the newly cited reference.

Applicants argue that the prior art of record fails to disclose the claimed invention such as attaching the plurality of flattened-ring compact bodies to one another.

Examiner traverses the argument that attaching applying an organic powder, which is vaporized during the firing step and separating the compact bodies. Examiner traverses that Matsymoto et al. teach steps of attaching a plurality of ceramic bodies vertically arranged in a vessel and forming ZrO_2 powder in between the ceramic bodies.

Even though Matsymoto et al. teach forming ZrO_2 powder in between the ceramic bodies, Yasuda teaches an organic powder binder that is dispersed during the firing process. Yasuda also teaches that even though the organic powder binder is dispersed during the firing process, the inorganic powder remains for preventing bond-sticking and enabling the separation of the fired mouldings easily.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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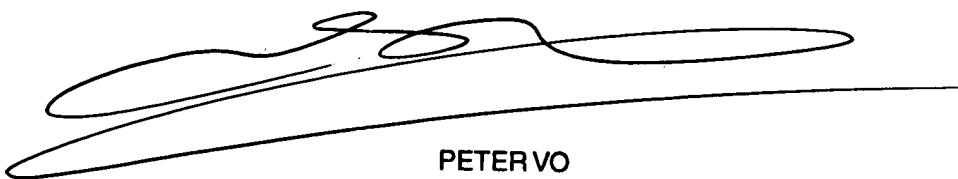
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

pdk
June 13, 2003

A handwritten signature in dark ink, appearing to read 'PETER VO', with a long horizontal line extending to the right.

PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700